

ROMER



- Infinite rotation
- Repeatability mounting adaptor
- High-resolution encoders
- Carbon fiber thermally stable
- New design for optimum rigidity
- Light and ergonomic wrist
- Touch trigger, contact or non-contact (infrared) probes (quick change and automatic detection)
- 3D Laser Scanning probe compatible

omega Ω

The affordable measuring portable Arm for 3D inspection needs. Its ergonomics, its robustness and the infinite rotation make OMEGA your ideal metrology tool for all your applications (geometrical measurement, surface control, reverse engineering...



The Best Price / Performances Solutions

OMEGA Arm is the **most economic** portable measuring system with 6 lengths of arms available. Take advantage of the best ratio Price/Performances to improve quickly and efficiently all your controls in the fields of sheetmetal, plastics, woodworking, foundry, fabricating, wires and tubes...

The OMEGA series offers total compatibility with all Romer accessories and equipment (sensors with or without contact, scanning probes, digital rails, VPS...)

For totally autonomous use, the OMEGA Arm is provided with a fixing puck for quick installation and a wireless battery pack with optional WiFi communication. Go for affordable measurements without constraints by using the OMEGA Arm.

Choose ROMER, the creator of the 3D portable measuring arms, and profit from a fast, intuitive measurement without constraints.

Specifications

Operating temperature range
+10°C to +40°C

Operating humidity range
5% to 90% non-condensing

Power supply
CA 100 to 240 VAC ($\pm 10\%$),
50/60Hz ($\pm 3\text{Hz}$)

Electromagnetic compatibility
Compliant with
CEM directives 89/336/EEC,
92/31/EEC, 93/68/EEC

Applicable norms:
EN61326(98), EN55022(94)
/ A1(95), EN61000-3-2(95)
/ A1(98) / A2(98) / A14(00),
EN61000-3-3(95), EN61000-
4-2(95) / A1(98), EN61000-
4-3(96), EN61000-4-4(95),
EN61000-4-5(95), EN61000-
4-6(96), EN61000-4-11(94)

Low voltage
Compliant with low voltage
directive 73/23/EEC, 93/68/EEC
Applicable norm: EN61010-1
(2001)



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Accuracy Specifications

Models	Measuring Range (Spherical diameter) mm	Repeatability Sphere Test a) mm	Repeatability Cone Test b) mm	Length Accuracy Test c) mm	Weight kg
2018	1800	± 0.020	± 0.036	± 0.050	5.2
2025	2500	± 0.034	± 0.048	± 0.068	5.3
2030	3000	± 0.070	± 0.076	± 0.108	5.4
2036	3600	± 0.098	± 0.108	± 0.148	5.5
2046	4600	$\pm 0,140$	$\pm 0,200$	$\pm 0,180$	5,7
2052	5200	$\pm 0,170$	$\pm 0,280$	$\pm 0,200$	6,2

Test methods

- a) **Measuring Sphere Test**
With the ball probe, points around a calibrated sphere are measured by the user. Data is used to calculate the center of the sphere with the best fit of the measured points. Then, the software determines the distance between each point and the sphere center minus the theoretical radius. The result gives an idea of the repeatability but generally, it is not used like a reference value to qualify accuracy of measuring machine.
- b) **Measuring Cone Test**
That is the reference test to determine measurement arm repeatability with ball probe. The cone is in front of the machine. Points are measured from multiple approach directions. The average point and the deviation of each point to the average center are calculated. The result is the standard deviation.
- c) **Volume Accuracy Test**
That is the most representative test for volume measurement accuracy. A gage block with a known and certified length is measured several times throughout the working volume. This gage block is installed in different positions and measured depending on multiple approach directions. The result is the standard deviation of the measuring distance less the theoretical length.

Equipment delivered with Omega Arm

- Omega Arm
- Romosoft including GDS (interface software)
- Set of 3 contact probes (point, 6 and 15mm ball diameter)
- HUB box (power supply) CE
- Fixing kit: a repeatable mounting puck, a fixing plate and c-clamps
- Counterbalance
- Verification bar
- Transport case

Software and hardware complementary equipments

- PC-DMIS, G-Pad, G-Surf, G-Tube software for geometric, surface and tube entities measurement
- R-Scan, the scanning accessory for reverse engineering
- Digital Rails from 800 to 3500mm
- VPS: Virtual Plate 4000 x 6000mm
- Non-contact probe for tube inspection



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